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# AGRICULTURAL HISTORY

July 1935

The Spanish Land-Grant System as an Influence in the Agricultural Development of California

*R. H. Allen*

The Ante-Bellum Agriculture of the Germans in North Carolina

*William H. Gehrke*

News Notes and Comments

Published Quarterly

*by*

THE AGRICULTURAL HISTORY SOCIETY

# AGRICULTURAL HISTORY

Published Quarterly by the Agricultural History Society

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AGRICULTURAL HISTORY is designed as a medium for the publication of research and documents pertaining to the history of agriculture in all its phases and as a clearing house for information of interest and value to workers in the field. Materials on the history of agriculture in all countries are included, and also materials on institutions, organizations, and sciences which have been factors in agricultural development.

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# AGRICULTURAL HISTORY

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## THE SPANISH LAND GRANT SYSTEM AS AN INFLUENCE IN THE AGRICULTURAL DEVELOPMENT OF CALIFORNIA<sup>1</sup>

Much of the best land in California which annually produces crops of fruits, nuts, and vegetables worth several hundred dollars per acre and something like \$200,000,000 in the aggregate was once freely granted to settlers in tracts frequently nearly 50,000 acres in size. Less than a century ago an economy and culture introduced by the families that trekked from Mexico to settle on these grants still prevailed. However, the discovery of gold, and later of the even greater agricultural wealth of the region, stimulated a development which has literally swept aside the leisurely Spanish life which seemed to be so firmly established.

In writings concerning the history of California and in conversations with its older residents one frequently encounters the idea that the Spanish system of land tenure and the economy which grew up about it stood as a serious barrier to agricultural development. Another view, perhaps equally widespread though seemingly somewhat inconsistent, is that the Spanish landowners were gravely wronged by the authorities of the United States who passed on their claims, and more particularly by the Americans who handled the legal matters in connection with these claims. Others who apparently took advantage of the inexperience of the grantees in financial matters are criticized for making loans at extravagant rates of interest and eventually acquiring lands through foreclosure. With these facts in mind we shall examine the land-grant system, the economy which sprang from it, and more particularly the fate of this economy in, and its influence upon, subsequent development.

<sup>1</sup> A paper presented at the joint session of the Agricultural History Society with the American Historical Association and other historical societies at Washington, D. C., on December 29, 1934.

## THE SPANISH OR MEXICAN SYSTEM OF GRANTING LANDS

The early settlement of California as well as that of most of the southwestern portion of the United States took place under the stimulation of a series of colonization laws providing for the granting of public lands to private individuals which were enacted by Mexico soon after the establishment of her independence in 1822.<sup>2</sup> Although made by the Mexican Government to her citizens, these grants as well as the grantees are commonly spoken of as "Spanish." The grants were made to meet the needs of men who wished to settle with their families and make a living from the land of this semi-arid region. While the apparent abundance of land made for generosity, the grants were not as extravagant as first thought would indicate. The country was dry and a large area was needed to furnish year-round grazing for the number of cattle that could be handled as a single herd. The grants were, in fact, better adapted to the needs of the settlers than were many of those in similar semi-arid regions settled under the homestead laws of the United States.

In California a system of agriculture had already become fairly well established at the missions before the colonization laws were passed, and this experience was the basis for determining what the new settlers needed. The missions actually held most of the better land in the more accessible areas, and land which might be used by them could not be included in private grants. Consequently it was not until after 1833 when they were deprived of the right to hold more than a few acres that the making of private grants could proceed. The Mexican law limited the amount that could be granted to one person to 11 square leagues, or about 49,000 acres. While this law was not rigidly enforced, grants usually did not exceed this maximum size and ranged to as low as a few thousand acres and occasionally even less.<sup>3</sup>

<sup>2</sup> Between 1775 and 1822 a number of grants were made in Alta California as well as in other parts of the Southwest under Spanish authority. T. H. Hittell, *History of California*, 2:746-750 (San Francisco, 1885), discusses these grants, mentioning thirteen of them. The rest were made by Mexico.

<sup>3</sup> *Ibid.*, 2:739-755. The size of these land grants has been frequently overstated, possibly because of a lack of familiarity with Spanish units of measurement. F. L. Paxson, *History of the American Frontier, 1763-1893*, p. 363 (Boston,

Twenty-six years elapsed between the gaining of Mexican independence and the transfer of California to the United States. In that period, and particularly during the last fifteen years, most of the valley land near the coast from San Francisco Bay southward was included in private grants. Only a few scattered grants were made in the less accessible and more arid interior valley.<sup>4</sup> When a United States commission was appointed to review land claims in California, 813 were presented.<sup>5</sup> The 604 claims which were declared valid included over 8,000,000 acres.<sup>6</sup> The sparseness of the population on these grants is indicated by a writer who said, "When California was taken from Mexico in the summer of 1848 there were only about ten thousand persons, besides Indians, in the entire territory: of these not quite two thousand were Americans."<sup>7</sup> This included the residents of the presidios where the military forces were concentrated.

#### LIFE ON THE RANCHOS

Life on the Spanish *ranchos* of California has been romanticized, possibly even more than that on the cattle ranges of the Great Plains. As a result, many of its features have become well known. It was simple, leisurely, and dignified, but probably less luxurious than popular accounts would lead us to believe. Cattle, already numerous in mission days, continued to thrive and multiply with little or no attention. Except for the annual slaughtering the only care was to keep the animals from stray-

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1924), speaks of "holdings running up into the thousands of square leagues." A similar statement is made by C. R. Niklason, "Commercial Survey of the Pacific Southwest," U. S. Department of Commerce, *Domestic Commerce Series 37*, p. 6 (Washington, 1930). Actually all of the grants in California combined included only about 2,000 square leagues.

<sup>4</sup> Forty-nine grants in the Sacramento and twenty-two in the San Joaquin Valley were confirmed. California State Surveyor-General Report, 1888-90, p. 43-59 (Sacramento, 1890).

<sup>5</sup> Katharine Coman, *Economic Beginnings of the Far West*, 2:253 (New York, 1925).

<sup>6</sup> California State Surveyor-General Report, 1888-90, p. 43-59.

<sup>7</sup> R. D. Hunt, *California the Golden*, 221 (New York, 1911). Paxson, *History of the American Frontier*, 364, states that "In 1846 there were not many more than six thousand Mexicans or Spaniards in all of Upper California."

ing. On a *rancho* comprising an entire valley from hilltop to hilltop, this was comparatively simple. Indians had been taught to perform many of the necessary tasks, particularly those of a less pleasant nature.

The main event in the work on the *rancho* was the annual *matanza* or slaughtering which usually took place in late summer when the cattle were fattest.<sup>8</sup> The animals were lassoed and butchered in the open by the *vaqueros* or cowboys who became very proficient in the use of the *reata* or rope and the knife. Only the choicest cuts of meat were saved. The fat was rendered in huge, iron kettles, and when partly cool, it was poured into large bags made from hides, held open by stakes driven into the ground. The hides were stretched out in the sun to dry.

The story of the hide and tallow trade between New England merchants and the early Californians is perhaps most widely known through Richard Henry Dana's *Two Years Before the Mast*. Some trade had been carried on earlier with Peru, and a mercantile house had been established at Monterey.<sup>9</sup> Yankee propensities for trade are well illustrated by the achievements of McCulloch, Hartnell and Company who gained permission from the Governor of California to trade in hides and tallow, and then made a three-year contract with most of the mission fathers for all of their product at a specified price.<sup>10</sup>

The hides and tallow were traded for those necessities which could not be produced on the *ranchos*, including clothing, tools, and household utensils. Most of the food was home grown although the methods of cultivation were primitive. Cattle raising held first place and supplied an abundance of meat. All cultivated land had to be fenced in order to keep out the stock, and consequently the supply of fruits and vegetables was limited, a few acres of wheat and a small patch of corn often being the extent of cultivation.

<sup>8</sup> For descriptions of *matanzas*, see W. H. Davis, *Sixty Years in California*, 46-49 (San Francisco, 1889), and Alfred Robinson, *Life in California before the Conquest*, 95-96 (San Francisco, 1891).

<sup>9</sup> C. R. Niklason, "Commercial Survey of the Pacific Southwest," 6.

<sup>10</sup> Adele Ogden, "Hides and Tallow; McCulloch, Hartnell and Company, 1822-1828," in *California Historical Society Quarterly*, 6:254-264 (September 1927).

## DISCOVERY OF GOLD

Gold was discovered on the American River in January 1848. The temperament of the Spanish *ranchero* did not permit his leaving his peaceful pastoral occupation to rush to the mines despite the advantage that his proximity afforded. This choice was perhaps wiser even than he realized since the increased demand for food incident to the influx of population made his herds of cattle a veritable gold mine in themselves. It was then that the *rancheros* became most prosperous. They were by nature carefree and spent their wealth freely.

The lure of gold was so great that very few of the thousands who arrived in California during the first few years after the discovery would consider any occupation other than mining. Practically all food and supplies had to be shipped in from Atlantic ports or from other countries.<sup>11</sup> The production of gold reached a high point of \$81,000,000 in 1852 after which it declined.<sup>12</sup> Since the number of miners was increasing constantly the output per miner declined even more rapidly and other enterprises became correspondingly more attractive. Many cattle were driven to California by the Overland Trail and from Oregon and New Mexico. Most of these cattle were of an American type vastly superior for meat purposes to the scrawny Spanish stock. The newcomers took over new valleys for ranges which were more favorably located with respect to markets than those of southern California. As a result, by 1860 the market was so well supplied with American beef that there was little demand for the inferior Spanish product, and there was no longer a sale for cattle on the northern ranges as they were fully stocked.

At this point the difficulties of the *rancheros* began. Accustomed to an extravagant manner of living it was difficult for them to diminish their expenses even to the level which pre-

<sup>11</sup> In 1853, for example, 100,000,000 pounds of flour and meat, 20,000,000 pounds of butter, 25,000,000 pounds of barley and corresponding quantities of other products were imported. H. Soule, J. R. Gihon, and J. Nisbet, *The Annals of San Francisco*, 494 (New York, 1855).

<sup>12</sup> H. H. Symons, "California Mineral Production and Directory of Mineral Producers for 1931," California State Division of Mines, *Bulletin 107*, p. 47 (Sacramento, 1932).

vailed before the gold rush. Borrowing was frequent, and little thought was given to the implications of the debts incurred.

#### THE DROUGHT OF 1863-65

The next blow came in 1863-65 in the form of a severe drought which resulted in the starvation of the major part of the Spanish cattle of southern California. The catastrophe was vividly described by the assessor of Monterey County in his annual report of 1865:

Two successive years of drought have almost swept the country clean of cattle, horses, and sheep. Out of seventy thousand head of stock cattle existing a few years ago, only twelve thousand seven hundred and twenty-four . . . are left. . . . The total absence of rain during the greater part of the winter of eighteen hundred and sixty-three and eighteen hundred and sixty-four, made pasture last year exceedingly scarce; its scarcity was felt as early as the month of May, when already valleys and hills were bare, and the cattle and horses left for the mountains, where, among the shrubbery, they did well during the summer, but when in the month of December they were visited by severe weather, snow, and hail, all that were not too weak moved to the valleys again, the rest, with few exceptions, died from exposure. A great number of those that had come down again to the lowlands died of starvation, or were killed by the owners in order to save the hides.

About five thousand head has been killed during last summer, at an establishment erected near Monterey, for their hides and tallow. Their average value was from two dollars to four dollars per head.<sup>13</sup>

The *rancheros*, already in debt, were financially unable to restock the ranges even if it had been profitable to do so. In the meantime, several developments tended to improve the prospects of grain production, thus providing "a way out" for many of the financially involved landowners. An outstanding feature of the psychology of these people is illustrated by the manner in which they reacted to these violent economic changes. Accustomed to a very simple system of cattle ranching and to the disposal of the products chiefly by direct exchange of goods, they were apparently quite incapable of taking an active part in new enterprises. The only procedure left open to them was to take advantage of what income they could derive from the lease or sale of their landholdings. During subsequent years many of them gradually became adapted to participation in new industries, but

<sup>13</sup> California State Agricultural Society *Transactions* 1864-65, p. 227 (Sacramento, 1866).



the actual changes in the economy of the region were much more rapid than those in the psychology of the inhabitants.

The numerous California valleys which were used for cattle grazing could readily be plowed and sowed to wheat or barley. As long as the grain farmer was in the minority he was handicapped by the expense of fencing his land to keep out cattle, but when grain farming came to dominate in a region this obstacle vanished. The drought, already mentioned, accelerated such a shift by removing large numbers of cattle from the ranges at one time.

The market for wheat in California was not long sufficient to absorb the increasing production of the State. After the harvest of 1854 it was estimated that there were 1,000,000 bushels in excess of the needs for consumption. The possibility of eastern shipments was being considered<sup>14</sup> and a cargo of wheat and flour was actually sent to the Atlantic Coast. No substantial development of exports took place, however, until after 1860. Although wheat production was also expanding tremendously in the Mississippi Valley, developments in the English market made it possible for the American production to be absorbed with only a moderate depression of the world price.<sup>15</sup> During the Civil War, the activities of Confederate raiding ships forced California merchants to buy much of their supply of manufactured goods in Europe, and the export of wheat not only facilitated payment, but also served as a return cargo for British ships, thus making costs very low.<sup>16</sup>

Another factor facilitating the spread of grain farming in California was the building of railroads. For a time grain was for the most part brought along the coast to San Francisco, or hauled from the nearby areas with oxen. The effect of the construction of railroads is illustrated by the change that followed the Southern Pacific Railroad as it was built southward from San

<sup>14</sup> *California Farmer*, 2(5): (Aug. 3, 1854).

<sup>15</sup> "Wheat and Rye Statistics," U. S. Department of Agriculture, *Statistical Bulletin* 12, p. 84 (Washington, 1926).

<sup>16</sup> Osgood Hardy, "Agricultural Changes in California, 1860-1900," in the Pacific Coast Branch, American Historical Association, *Proceedings* for 1929, p. 216-230.

Francisco. It reached San Jose, 40 miles away, in 1864, and Salinas, 50 miles farther on, in 1872.<sup>17</sup> The shift from livestock to grain followed its progress very closely.

The mechanization of grain production was also an important factor as California's physical conditions were peculiarly suited to the use of machinery, and labor was scarce. The header which came into use about 1860 was especially useful in the dry climate. Although the wire binder and later the twine binder were perfected for use in humid regions, the header became the usual harvesting machine. In the 1880's the wheat harvest was accomplished chiefly with twelve-foot headers drawn by six horses or mules, each cutting from 15 to 25 acres per day. Three wagons were generally used with each header.<sup>18</sup> Steam threshers burning straw came into general use and likewise gang plows.

The chief factors which brought about the first major change in California agriculture have been indicated. In the first place the producers of beef of a better quality took away the market for the Spanish product. Then the drought swept away much of the stock from the ranges. The market for wheat expanded, first in California and later in England. Means of transporting grain underwent great improvement as did also methods used in its production. The natural course of events in these circumstances was for land to pass from Spanish ownership or operation to American, and for large holdings to be split up for sale or rental purposes. It is, however, inaccurate to generalize about such changes. There were naturally numerous local divergences from this course of events. The subsequent changes whereby irrigation was introduced and a multitude of more intensive crops replaced grains on the better soils are much more diverse. It is essential to describe small portions of the State in illustrating these changes. A study by the author of the subdivision and agricultural development of the larger land grants in four im-

<sup>17</sup> California State Commissioner of Transportation *Biennial Report* for 1877-78, p. 156 (Sacramento, 1879).

<sup>18</sup> U. S. Bureau of the Census, Tenth Census, 1860, "Report on the Production of Agriculture," 457-458 (1863).



portant agricultural counties has indicated the nature of some of these changes.<sup>19</sup>

#### LAND GRANTS IN SACRAMENTO COUNTY

There were six grants entirely within the boundaries of Sacramento County, located in the lower part of the great interior valley with the same name. Three along each of two of the larger rivers included about a third of the area of the County. An unusual feature of the grants in this County was that only one was made to a Spanish settler. This area was on the northern fringe of Spanish settlement, and the grants were all made in 1844 after the arrival of many Americans.<sup>20</sup>

The land along the Sacramento River, now comprising the richest agricultural portion of the County, was passed over when the grants were awarded since they were of little use without drainage and protection from flood. The land granted was of variable soil types and in general rather poor in quality except for small areas of bottom land along the rivers. Part of the grants required clearing for cultivation. Where this was the case grain farming could hardly pay the cost, and cattle, and later sheep, continued to utilize much of the land until more intensive crops were introduced. Where grain could be grown the yields were low, and large acreages were needed for farm units. Likewise the large grants were acquired for the most part by capitalists. As a result, grants tended to remain intact until the time when the sale of small fruit-farms became possible. A favorable opportunity was then presented for colonization activities.

The largest of these grants, 44,000 acres in size, was acquired from the grantee by the attorney who served him in a legal capacity. It was used for a number of years as a huge sheep

<sup>19</sup> "The Influence of Spanish and Mexican Land Grants on the Agricultural History of California" (MS, Giannini Foundation of Agricultural Economics, University of California, Berkeley, 1932).

<sup>20</sup> California State Surveyor-General *Report*, 1888-90, p. 43-59. This report gives the following information for each land grant: name, confirmee, area, condition of title, and county (or counties) where located.

ranch. Later, it was found that it could be leased profitably in tracts of 300 acres or more to grain farmers. The grant was held intact until 1911 when it was sold to a colonization company at a price reputed to be \$2,500,000. It was then rapidly divided into tracts of 20 or 40 acres and sold to newcomers from the east for use in growing intensive, irrigated crops. The soils were not uniformly adapted to such development, and there has been considerable reversion to grain farming and pasturage. In some of the area small places have a residential value, and poultry raising has been found profitable where the soils are too poor for cultivation.

Three other grants passed through a somewhat similar development. Although they were not retained intact by a strong hand as in the case just discussed, they remained for the most part in large holdings devoted first to cattle and later to sheep ranching. Still later, grain farming developed in the open areas. In the eighties a series of colonization projects of the type just described were begun.

The story of the other two grants is somewhat different; in one, because of the predominance of mining, and in the other, because of greater agricultural value. A significant point is that the latter grant, one-third of which was rich river-bottom land, experienced a somewhat different development. It was subdivided among a number of ranchmen upon the death of the grantees. Grain was later introduced, and in the eighties fruit growing was begun on a commercial scale. Dairying and hop production also became important. Most of the grant is now in holdings of 100 to 1,000 acres each, and it has remained chiefly in the hands of ranchers and farmers. There have been no large speculative holdings or attempts at colonization as the poorer grants in the County were less in demand for farms and were thus more easily and cheaply available to capitalists. As a result the better bottom lands have remained in more stable use. The present-ownership map of the County indicates that more subdivision of the colonization type has taken place within the boundaries of the original grants than in the remainder of the County. This difference is not entirely explained by varia-

tions in physical characteristics, but it is probably in part due to the fact that the grants could be acquired in large tracts at little expense by land speculators.

#### LAND GRANTS IN CONTRA COSTA COUNTY

Contra Costa County, lying along the opposite shore of San Francisco Bay from the Golden Gate, contains several small valleys with good soil. The sixteen grants made in this County covered about 45 percent of its total area. The nine largest which included some agricultural land of significance have been studied. They were made earlier than those in Sacramento County, and, with one exception, to Spanish settlers. The valleys experienced the more typical development of cattle ranching and the subsequent replacement by grain farming already described. They produced excellent feed for cattle and also good crops of grain. Because of the available water transportation to San Francisco the changes came earlier than in most parts of the State. Grain farmers began to arrive in 1850, and during the next twenty years practically all of the valley lands were taken over by new settlers as grain farms. The later development of more intensive agriculture seems to have had little relationship to the land-grant lines in these valleys. Three of the grants included rough land less valuable for agricultural purposes, and these were broken up more slowly. They did not remain long in the hands of the grantees but were purchased in considerable part by real estate dealers. A number of colonization attempts resulted, but they met with little success.

#### LAND GRANTS IN MONTEREY COUNTY

Monterey County is of special interest for this survey as it has often been spoken of as the last stand of the Spanish cattlemen. Here the Spanish cattle-ranching economy became most firmly fixed, and Spanish institutions and customs have been longest preserved. Its agricultural area consists chiefly of a long, narrow valley 12 to 18 miles wide near Monterey Bay that narrows to about one mile in width 75 miles to the southeast. Sixty-four grants, including practically all of the smaller valleys

as well as the main one, were eventually confirmed. Twelve were over 10,000 acres in size and were located on important agricultural land.

The Salinas Valley was settled early, and ranching had become well established when the drought of 1863-65 destroyed many of the cattle. The shift to grain farming, already described, took place directly afterward in the lower part of the Valley, and spread southward with the extension of the railroad. Before rail transportation was available, however, a prosperous sheep industry developed in the more remote parts. Several new settlers acquired large portions of certain grants before grain farming had become profitable. On three of these grants large-scale grain and dairy farming was attempted but, as these attempts were not long sustained, the holdings in most cases soon broke up into grain farms of the more usual size. In the less accessible San Antonio Valley several attempts to sell tracts as grain, dairy, and fruit farms have failed, and the whole area is still used principally for stock ranching in very large holdings.

Some of the later agricultural developments will be examined briefly to show the influences of the land-grant system that still prevailed.<sup>21</sup> As in most other parts of the State, the beginnings of modern agriculture are closely related to the development of irrigation. The Spanish missions had undertaken irrigation on a considerable scale.<sup>22</sup> The Soledad Mission constructed an aqueduct 15 miles long to bring water to the cultivated lands. With the decline of the missions the irrigation ditches fell into disuse as the large cattlemen and later the grain farmers did not need them.

The first claims for water from the Salinas River were filed in 1877.<sup>23</sup> Successful canal building, however, did not begin until

<sup>21</sup> This discussion is based chiefly on the investigations of the author in preparing his thesis on "The Economic History of Agriculture in Monterey County, California, during the American Period" (Berkeley, 1934).

<sup>22</sup> H. H. Bancroft, *California Pastoral, 1769-1848*, p. 202 (*The Works of Hubert Howe Bancroft*, vol. 34. San Francisco, 1888).

<sup>23</sup> C. D. Marx, "Report on Irrigation Problems in the Salinas Valley," in U. S. Department of Agriculture, Office of Experiment Stations, *Bulletin 100*, p. 196 (Washington, 1901).

about 1896. A few tracts were watered prior to this time by small diversion ditches or wells either flowing or pumped by windmills. The first major use of irrigation was in growing alfalfa as a part of dairy farming.

In 1897 the construction of a beet-sugar factory was begun, and beet growing and dairy farming developed, replacing grain farming on some of the more fertile soils. Since a considerable quantity of beets was essential to the successful operation of a beet factory, the Spreckels Sugar Company purchased several tracts of land, operating part of it directly and the remainder under contract. Only one of the tracts purchased constituted a large portion of a land grant, and it was in the more remote southern part of the County where subdivision had been less rapid. The activities of the company tended to keep beet production on a comparatively large scale, and as a result only a small amount of subdivision was brought about by the introduction of the beet-sugar industry.

Dairying early came to be dominated by Swiss and Portuguese immigrants. The customary practice for these people was to begin by renting tracts of 100 to 300 acres from the large landholders who had been grain farmers or who had leased their lands to grain farmers. Having started in this manner, they could with good fortune eventually purchase the farms which they had been renting.

The change to more intensive crops made possible by irrigation took place chiefly in response to the development of markets and improvements in methods of production and means of transportation. By 1890 most of the subdivision of cattle ranches into grain farms had been completed. The Census of that year indicates that the number of farms in the County had doubled during the previous decade, and that most of them were from 100 to 500 acres in size. The subsequent replacement of grain with irrigated field crops and eventually with truck crops increased land incomes and values and tended to further decrease the size of farms. The amount of subdivision accompanying this intensification of agriculture, however, has not been large. Although there has been a substantial increase in the number of farms



under 100 acres in size, the total number of farms increased only 13 percent between 1890 and 1930.

The development of Monterey County has been primarily agricultural, and the subdivision of land for residential or industrial purposes has been relatively unimportant.<sup>24</sup> The same may be said of the promotional type of agricultural subdivision. The size of farms has therefore been determined by individual efforts of farmers to adjust the quantity of land under their control to their needs. Some lag has undoubtedly occurred in the greater part of this area where major shifts in type of production have followed one another so rapidly. This lag has tended to keep farms somewhat larger than would be the case with free adjustment, since the changes have been uniformly in the direction of a more intensive agriculture.

There has been a considerable development of tenancy in Monterey County. It first appeared during the late sixties and the seventies as a direct outgrowth of the introduction of grain farming. The pioneer grain-farmers were often financially unable to purchase farms immediately, and facilities for mortgage credit were undeveloped. Tenancy thus arose out of conditions that did not exist in those parts of the United States where land was given to pioneer grain-farmers under the provisions of the various homestead laws. The Census of 1880 reported that 35 percent of the farms were operated by tenants.

The later shifts to more intensive types of farming brought new waves of tenants, some of whom became owners during the more stable periods between major changes.<sup>25</sup> In the central part of the Salinas Valley, as has already been noted, Portuguese and Swiss dairymen rented lands previously in large grain farms. Later some of these farms were leased to vegetable growers. Census data show the proportion of tenancy in Monterey County

<sup>24</sup> The census of population in 1930 showed that 35 per cent of the persons 10 years old and over in gainful occupations in the county were in agriculture, and 4 per cent more were in slaughter and packing houses and other food and allied industries. U. S. Bureau of the Census, *Fifteenth Census, 1930, Population*, 3(1):274 (Washington, 1932).

<sup>25</sup> The Census of 1890 showed 22 per cent of the farms operated by tenants, and since that time the proportion has fluctuated between 30 and 35 per cent in census years.

to have been greater than in the State as a whole throughout the period for which comparable figures are available.

#### LAND GRANTS IN VENTURA COUNTY

Ventura, the most southerly county to be considered, is on the coast directly north of Los Angeles. Of the seventeen grants confirmed in this county, ten were over 10,000 acres in size. One of these included 113,000 acres, being over twice the maximum size prescribed for private grants. In fact, this locality was especially characterized by a concentration of landholdings. The De la Guerra family, in special favor with the authorities, was able to acquire eight grants at one time, including the large one just mentioned and two others. Later, a similar concentration of ownership in the hands of Thomas Scott, an official of the Pennsylvania Railroad especially interested in oil rights, took place. The ownership of his extensive holdings passed to his agent, Thomas R. Bard.

The valleys of Ventura County were rapidly taken up in grants after 1833 and were well stocked with cattle, but the drought of 1863-65, which was particularly severe in this part of the State, destroyed large herds and impoverished even the wealthy family that once controlled eight grants. Sheep ranching was then introduced and became quite important. However, in 1876-77 a second drought proved highly disastrous to the sheep industry. Subsequently, grain farming spread rapidly and considerable subdivision took place. Four of the ten grants were purchased during this period by Scott. Having acquired the oil rights on four grants he actively engaged in farming while trying to sell lots to settlers. Two of the other more valuable grants were secured by men interested in agriculture. Most of the lands were thus concentrated in the hands of a few capable managers who facilitated their subdivision. Since the agricultural possibilities of the valleys were great, subdivision and development took place rapidly.

#### CONCLUSION

An examination of an economic development of this magnitude reveals the number of influences that played a part in shaping

the course of events. The production of hides and tallow for distant markets was the only enterprise to which the country was adapted during the period when land was being freely granted. The grants constituted desirable units for cattle ranching, and the settlers soon became firmly established in this occupation.

Later developments in markets, production methods, and transportation made more intensive farming profitable. Smaller operating units became desirable, and people coming into the State from the east were better equipped by past experience to carry on the new type of agriculture. In some cases operating units were made smaller by subdivision and sale to newcomers, but often the large holdings remained intact and were leased in parcels. The holdings were probably more adaptable to the prevailing kinds of farming than those in other parts of the United States where land was acquired in tracts which later proved too small for efficient operation. Considerable tenancy developed with the introduction of more intensive forms of agriculture.

It is significant that the greater part of the better agricultural lands have been continuously owner-operated, while speculative holdings and colonization attempts have often been located on poor lands. Such lands included in grants often remained intact until after 1880 when it became possible to provide water by irrigation and sell small lots to unwary settlers at extravagant prices. The existence of large private holdings facilitated large-scale activities. Much ill-conceived and unstable settlement resulted in hardship to the settlers. In these regions settlement was more dense in relation to agricultural resources than it was in the better areas where subdivision took place earlier and where there was less opportunity for colonization.

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## THE ANTE-BELLUM AGRICULTURE OF THE GERMANS IN NORTH CAROLINA

The valley between the Yadkin and the Catawba Rivers, where the majority of the Germans who trekked to North Carolina during the third quarter of the eighteenth century settled, has been termed the Mesopotamia of North Carolina. Practically all early accounts mention evidences of the agricultural advantages possessed by this section,—the “luxurious range of grass, cane, and pea vines, the towering forests” and the gigantic size of trees, some of which could accommodate a wagon load of goods in their hollow trunks.<sup>1</sup> However, it lacked limestone, the loadstone of the Germans in other regions. Although the soil of the Coastal Plain is sandy and easily cultivated, its fertility is speedily exhausted; that of the Piedmont over which the Germans gradually spread is heavier and loamier, requiring sturdier horses and stronger implements, but it has the decided advantage of remaining fertile longer. Beginning at Abbots Creek in the present Davidson County and along the Yadkin River, the Governor of North Carolina observed very rich, dark-red soil, some inclining to yellow, of the richest loam in 1755.<sup>2</sup> When the fame of the fertility of this new land of promise reached the Middle Colonies, emigrants flocked southward by wagon trains and the Germans sought particularly the richer bottom lands.<sup>3</sup>

### SIZE AND VALUE OF FARMS

While a number of the pioneer Germans secured very large grants, some of the first grantees acted as agents for friends and

<sup>1</sup> The quotation is a reminiscence of early settlers in the *Western Carolinian*, July 24, 1821. A. L. Fries (ed.), *Records of the Moravians in North Carolina*, 4:1578 (Raleigh, 1922-30). Hereafter, this work is cited as *Records of the Moravians*.

<sup>2</sup> W. L. Saunders (ed.), *The Colonial Records of North Carolina*, 5:355 (Raleigh, 1886-1890). Hereafter, this work is cited as *Colonial Records*.

<sup>3</sup> Hugh Williamson, *The History of North Carolina*, 2:71 (Philadelphia, 1812); *Colonial Records*, 5:149, 356; 7:248.

relatives and so occasionally a grant of 500 to 600 acres was intended to accommodate two or three families, who, in this way saved the fees of separate surveys.<sup>4</sup> Compared with the plantations of the Coastal Plain, the farms along the Salisbury-Charlotte highway were small, consisting of 200 to 300 acres in the present Davidson County.<sup>5</sup> In Orange County as it existed in 1790, 107 German farms, ranging from 50 to 1,290 acres, averaged 256 acres.<sup>6</sup> Plantations like those of Martin Phifer, Jr., who was said to have been the largest individual landholder in the Commonwealth during the eighteenth century, and of John Beard, who owned 12,825 acres in three counties in 1820, were exceptions among the Germans.<sup>7</sup>

The value of the land, then as now, depended on the location, the quality of the soil, the amount of cleared acreage, and many other factors. Thus, in 1762, one farmer paid £10 3s.4d. in proclamation money for 180 acres, while another paid £50 16s.6d. for 151 acres.<sup>8</sup> Expressed in terms of commodities, a more dependable index of values, £50 would have purchased 500 bushels of corn, 300 of wheat, or 350 of dried beans at that time.<sup>9</sup> In 1793, 45 acres near Salisbury sold for £80, and two years later 300 acres, several miles from the village, brought £82 10s., the equivalent, according to wages then prevailing, of approximately eight hundred days of cradling in the meadow.<sup>10</sup>

<sup>4</sup> Leonard Killins's two grants in 1749-1750 amounted to 1,250 acres; William Dry's four grants in 1751 totaled 1,300 acres; in the same year four grants to Daniel Warlich comprised 2,460 acres, and Henry Whitner owned five tracts containing a total of 3,740 acres. *Colonial Records*, 4:961, 1047, 1049, 1240, 1252; 5:149.

<sup>5</sup> J. F. D. Smyth, *A Tour in the United States of America*, 1:113 (Dublin, 1784); W. K. Boyd (ed.) and C. A. Krummel (tr.), "German Tracts Concerning the Lutheran Church in North Carolina during the Eighteenth Century," in the *North Carolina Historical Review*, 7:246 (April 1930).

<sup>6</sup> By inspection of the surnames, the writer selected the Germans from the tax-lists in Walter Clark (ed.), *The State Records of North Carolina*, 26:1286-1290 (Goldsboro, 1886-1907).

<sup>7</sup> J. H. Wheeler, *Reminiscences and Memoirs of North Carolina and Eminent North Carolinians*, lxx (Columbus, 1884); *Western Carolinian*, Jan. 29, 1822.

<sup>8</sup> *Harris Deed Book* (Mecklenburg County), 2:29, 84.

<sup>9</sup> Based on table in *Records of the Moravians*, 1:263-264. At this time land in Forsyth County rented for 1s. per acre and bottom land at 2s.

<sup>10</sup> Carl August Gottlieb Storch, "Journal" (Collegiate Institute, Mt. Pleasant, N. C.); Johann Gottfried Arends, "Journal" (Lenoir-Rhyne College, Hickory, N. C.).

During the first half of the nineteenth century, the prices of farms remained stationary, or decreased, rather than increased, in value. Two hundred and fifty-three acres, situated in the vicinity of two German churches on Second Creek in Rowan County, sold for £50 in 1802.<sup>11</sup> For \$280, Hinton Rowan Helper, in 1856, conveyed a fourth interest in one of the best farms, a 200-acre tract located two and one-half miles west of Mocksville, to his brother, who paid the highest market price in order to become the sole proprietor.<sup>12</sup>

#### FIELD CROPS

That the Germans engaged in diversified farming from the beginning is evidenced by the first agricultural report. Writing in 1755, the Governor said:

... there are 22 families of Germans or Swiss, who are all an industrious people, they raise horses cows and hogs with a few sheep, they raise Indian Corn, wheat, barley, rye and oats [and] make good butter and tolerable cheese, and they have gone into indigo with good success, which they sell at Charles Town, having a waggon road to it, . . . the air is fine, water good, running springs from each Hill and the Country so healthy that few or none have died since their settlement 7 or 8 years ago, they sow flax for their own use and cotton, and what Hemp they have sown is tall and good. . . .<sup>13</sup>

The products enumerated show that these German emigrants had readily adapted themselves to entirely new conditions, as cotton was not grown either in the Fatherland or in Pennsylvania, whence a majority had moved.<sup>14</sup> Both rice and indigo succeeded remarkably well in the region of Salisbury.<sup>15</sup> Besides the beans and pumpkins grown between the rows, corn land produced about

<sup>11</sup> Original Deed, Windle Miller to Phillop Miller, Rockwell, N. C.

<sup>12</sup> Davie County Deed Book, 4:41; Hinton Rowan Helper, *The Impending Crisis of the South*, 132-134 (New York, 1857).

<sup>13</sup> *Colonial Records*, 5:356. Arthur Dobbs probably wrote "Germans & Swiss."

<sup>14</sup> The Germans who founded a settlement in the present Forsyth County in November 1753 planted cotton the following spring. *Records of the Moravians*, 1:103

<sup>15</sup> Paul Jakob Bruns, *Geographisches Handbuch in Hinsicht auf Industrie und Handlung*, 17 (Leipzig, 1788); Johann Caspar Velthusen (ed.), *Nordcarolinische Kirchennachrichten*, no. 2, p. 18 (Stade, 1792).

20 bushels per acre in 1762, a yield equalling that of good land in Lincoln County forty years later.<sup>16</sup>

Since the Germans preferred wheaten to corn bread, they grew this cereal rather extensively, giving Rowan County the appearance of a wheat country. In Lincoln County, where fewer Germans had settled, wheat was grown mainly for home consumption in 1800, and the small quantity of flour shipped to Charleston and Savannah sold 15 percent cheaper than flour from Pennsylvania.<sup>17</sup> In 1821, a German censured the farmers of all racial elements for regarding a yield of  $7\frac{1}{2}$  bushels per acre as satisfactory, but eleven years later one of the most progressive German farmers estimated that a well-managed field of 30 acres should average that amount.<sup>18</sup>

#### MEADOWS

In spite of the tradition that a North Carolinian introduced timothy to the world by way of England, meadows were unknown in North Carolina prior to their introduction by the Germans of Rowan County.<sup>19</sup> One of their first concerns upon arrival was the preparation of meadows.<sup>20</sup> After journeying 153 miles westward from Edenton in 1752, Bishop Spangenberg lamented, "no one makes meadows," but he found comfort in the fact that his fellow-countrymen were filtering into the back country.<sup>21</sup> Nor

<sup>16</sup> *Records of the Moravians*, 1:100, 250; F. A. Michaux, "Travels to the West of the Alleghany Mountains in the States of Ohio, Kentucky, and Tennessee, and Back to Charleston, by the Upper Carolines (London, 1805)," in *Early Western Travels, 1748-1846*, edited by R. G. Thwaites, 3:297 (Cleveland, 1904).

<sup>17</sup> *Ibid.*, 297; J. A. Hoskins (compiler), *President Washington's Diaries, 1791 to 1799*, p. 41 (Summerfield, N. C., 1921).

<sup>18</sup> *Western Carolinian*, July 17, 1821; *Greensboro Patriot*, Oct. 10, 1832.

<sup>19</sup> E. W. Caruthers, *A Sketch of the Life and Character of the Rev. David Caldwell*, 52n (Greensborough, N. C., 1842). Although Graffenried, the founder of the first German colony in North Carolina in 1710, declared that the lowlands could, by repeated mowings, undoubtedly be made to furnish hay (V. H. Todd and Julius Goebel, *Christoph von Graffenried's Account of the Founding of New Bern*, 194 [Raleigh, 1920]), it appears that the Germans of Craven County did not farm extensively. Morris Walker stated, in 1748, that his fellow-countrymen "had for many years been employed in manufacturing pitch and tar." *Colonial Records*, 4:873.

<sup>20</sup> *Records of the Moravians*, 1:91.

<sup>21</sup> *Ibid.*, 1:37.

was he disappointed with their method of farming. When the Governor visited a German farm in Mecklenburg County in 1768, he commented in his diary, "a beautiful Plantation and skilfully managed particularly the meadow Land which produced *excellent hay*."<sup>22</sup> One German farmer made a deathbed request that his son should have the use of one acre of meadow land for four years.<sup>23</sup> Another produced sufficient hay to enable him to sell his pastor a large load in 1791 for £2 5s.<sup>24</sup> On his southern tour, George Washington noted "the first meadows I have seen. . . since I left Virga." between Charlotte and Salisbury.<sup>25</sup> In practically every reference to the crops on German farms, mention is made of hay or meadows.<sup>26</sup>

Farmers without meadows were held almost in derision and contempt. On a trip through Halifax County in 1800, a native German of Rowan County gave vent to his disgust with Virginia farmers in these words: "If continued amazement over the stupidity of the people is going to give a person a thick-head—that is my case. We are astonished when looking at. . . the fields. . . . It is a good country and there is opportunity for pasturage and not a handful of hay can you get."<sup>27</sup> Moreover, to stimulate the production of hay in North Carolina, a German caused the Board of Agriculture to send grass seed to each agricultural society in the State in 1824.<sup>28</sup> However, for many years, meadows remained a distinctive feature of German agriculture. In 1839, an editor complained of the general lack of artificial grasses on North Carolina farms.<sup>29</sup>

While a meticulous German diarist of 1764 recorded the finding of a plant of red clover with four to six leaves and another stem

<sup>22</sup> *Colonial Records*, 7:825.

<sup>23</sup> Andrew Rhinehart's Will, Feb. 16, 1785 (N. C. Hist. Commission).

<sup>24</sup> Storch, "Journal."

<sup>25</sup> Hoskins, *President Washington's Diaries*, 41.

<sup>26</sup> David Low's Will, May 17, 1787, Guilford Wills, A, 215; *North Carolina Mercury and Salisbury Advertiser*, Dec. 26, 1799; *Western Carolinian*, Nov. 26, 1822; Paul Barringer's Will, Cabarrus County, 1:59, etc.

<sup>27</sup> Theodore Graebner (tr.), "Diary of Paul Henkel," in the *Concordia Historical Institute Quarterly*, 1(1): 16ff. (St. Louis, 1928).

<sup>28</sup> *Western Carolinian*, June 1, 1824.

<sup>29</sup> *Patriot*, Apr. 23, 1839.

"in the same field" with seven leaves, very little, if any, clover was grown for forage prior to 1825.<sup>30</sup> As late as 1821, an intelligent German, in an address to Rowan farmers, declared that he considered the prevalent opinion that clover would not succeed so far south "entirely erroneous."<sup>31</sup> By 1832, however, "clover for all the milch cows and other stock" was a well-known crop on German farms, and alert Germans also used it as a soil builder, at least as early as 1844.<sup>32</sup>

#### LIVESTOCK

Concerning livestock in North Carolina in 1752, a German recorded the following:

Cattle and horses must look out for themselves in winter,—if they live, they live. No hay is given them, for no one makes meadows; fodder does not go far; and who could feed them on grain? So ordinarily in winter there is neither milk nor manure, and when spring comes the animals are so reduced by hunger and cold that they hardly recover before fall. So even in spring and summer they do the people little good. Probably this is the reason that horses and cattle are so small in the part of North Carolina which we have seen. . . .<sup>33</sup>

Because of the "leanness of the cattle," British soldiers at Charlotte in 1781 found it necessary to slaughter one hundred head a day.<sup>34</sup> The inferiority of the livestock, as measured by modern standards, is indicated by the fact that in one settlement the Germans themselves slaughtered three cows that averaged only 320 pounds, and three oxen averaging 420 pounds, though it should be specifically stated that these cattle were butchered on December 21, 1754, less than fourteen months after the founding of the settlement.<sup>35</sup>

Contemporary accounts unanimously testify not only to the existence of livestock on German farms, but also to the superiority of their horses and cattle to those of the other racial elements. In 1754, ten months after founding their colony, eleven

<sup>30</sup> *Records of the Moravians*, 1:288.

<sup>31</sup> *Western Carolinian*, July 17, 1821.

<sup>32</sup> *Patriot*, Oct. 10, 1832; *Patriot and Flag*, Mar. 5, 1858.

<sup>33</sup> *Records of the Moravians*, 1:39.

<sup>34</sup> C. L. Hunter, *Sketches of Western North Carolina*, 133 (Raleigh, 1877).

<sup>35</sup> *Records of the Moravians*, 1:113.



single men owned twelve cows and twelve calves, while in the following year, twenty-two newly settled families were raising horses, cows, hogs, and sheep.<sup>36</sup> However, as late as 1800, a dozen sheep were regarded as a large flock. One farmer found a "milk house" necessary, and, in 1786, required his sons to furnish sufficient feed and shelter to enable his wife to keep three cows and a heifer with her offspring; another willed his wife two cows "of her choice;" and a third owned one hundred head of cattle.<sup>37</sup> According to a sale notice in 1842, a German owned the following livestock: 27 horses, 75 head of cattle (a cross of Durham and Ayrshire), 200 hogs, and 150 sheep (many of the Bakewell breed).<sup>38</sup>

As to the quality of this stock, the Indians declared that "the Dutchers had great fat horses."<sup>39</sup> Elkanah Watson observed that the moment he reached the German settlement in the present Forsyth County "the cattle seemed larger, and in better condition."<sup>40</sup> At the turn of the nineteenth century, a traveler, who failed to see the principal German colonies, declared that he had not seen a single steer in North Carolina that compared favorably, either in size or breed, with steers in England.<sup>41</sup> It may be inferred from a contemporary German's criticisms of livestock in Virginia that he was accustomed to seeing better cows and horses in his parish of North Carolina Germans. "Everywhere," he wrote, "we noted the ignorance of the people regarding agriculture—very lean cows and horses. . . the cows as lean as those seen by Pharaoh in his dream."<sup>42</sup> When, because of the increase in the population of Salisbury, the demand for beef cattle greatly exceeded the supply, a German in the town persistently urged the local farmers to cross their stock with the best

<sup>36</sup> *Ibid.*, 104; *Colonial Records*, 5:356; F. A. Michaux, in *Early Western Travels*, 3:300.

<sup>37</sup> Peter Caspar's Will, Feb. 3, 1786 (N. C. Hist. Commission); Henry Wetzel's Will, Nov. 14, 1789 (N. C. Hist. Commission); *Western Carolinian*, Oct. 30, 1821.

<sup>38</sup> *Patriot*, July 30, 1842.

<sup>39</sup> *Records of the Moravians*, 1:221.

<sup>40</sup> W. C. Watson (ed.), *Men and Times of the Revolution*, 255 (New York, 1856).

<sup>41</sup> F. A. Michaux, in *Early Western Travels*, 3:299.

<sup>42</sup> "Diary of Paul Henkel," in *Concordia Historical Institute Quarterly*.

breeds in the north.<sup>43</sup> At an agricultural fair in Salisbury in 1822, the prizes for a boar, a breeding sow, and a colt were awarded to Germans, and at the State fair in 1853, a German farmer was awarded the first, second, and third premiums on five head of Devon cattle.<sup>44</sup>

Work oxen do not appear to have been popular with German farmers. One who worked twenty-five to thirty head of horses also owned a yoke of oxen.<sup>45</sup> Another, who owned seventy-five horses, recommended a team of horses and a yoke of oxen, rather than three horses, to farmers who tilled 120 acres because of the saving in grain and the added manure.<sup>46</sup>

#### FARM TOOLS

"In 140 miles I saw not one wagon or plough, nor any sign of one,"<sup>47</sup> Bishop Spangenberg wrote while journeying through a non-German section of North Carolina in 1752. Not only have a German emigrant's directions for making a plow been preserved, but, from the beginning of their settlements, German mechanics manufactured implements.<sup>48</sup> A detailed inventory of a German farm in 1786 lists harness for two horses, an iron wagon, plows, an iron tooth harrow, forks, scythes, axes, mattocks, hoes, shovels, saws, hammers, chisels, augers, a gimblet, and wedges.<sup>49</sup> Besides these implements, a more prosperous farmer had a forge, a tannery, a distillery to make peach brandy, a corn mill, a saw mill, and a cotton gin in 1802, the last three operated

<sup>43</sup> *Western Carolinian*, July 17, 1821.

<sup>44</sup> *Ibid.*, Jan. 21, 1823; *Patriot*, Nov. 5, 1853.

<sup>45</sup> *Western Carolinian*, Oct. 21, 1821.

<sup>46</sup> *Patriot*, Oct. 10, 1832.

<sup>47</sup> *Records of the Moravians*, 1:39. Along the seaboard in 1775, "every instrument of husbandry was unknown . . . the only instrument used is a hoe, with which they at once till and plant the corn." [Janet Schaw], *Journal of a Lady of Quality . . . 1774 to 1776*, edited by E. W. Andrews and C. M. Andrews, 163 (New Haven, 1921).

<sup>48</sup> J. R. Nixon, "The German Settlers in Lincoln County and Western North Carolina," in *James Sprunt Historical Publications*, 11 (2):57 (Chapel Hill, N. C., 1912); *Records of the Moravians*, 1:82.

<sup>49</sup> In 1821, a German declared, "I have known considerable planters, instead of iron traces, make use of grape vines and hickory withes." *Western Carolinian*, July 24, 1821. Rowan County Court Minutes, August 1786.



by water power.<sup>50</sup> When more efficient tools, such as the Dagon, Cary, and Freeborn plows, were placed on the market, the more progressive Germans speedily bought them and recommended their use to others.<sup>51</sup> Of the four farmers who purchased four-horse threshing machines from Columbia County, Pennsylvania, in 1843, three were of German extraction.<sup>52</sup> Among the implements used on a model German farm in 1857 were a clod crusher, manufactured by R. Sinclair, Jr., of Baltimore, a three-horse reaper made by Obed Hussey in Baltimore, and a Fairbanks balance.<sup>53</sup> While a good wagon was a prized possession in the early days, one German willing shares in his wagon to several sons, it appears that every German farmyard contained at least one wagon. Later, a more prosperous farmer might own as many as three wagons, besides a gig and a buggy.<sup>54</sup>

#### BARNs

Livestock and implements were sheltered in barns which were an adaptation of the famous Pennsylvania-German barns. They were "immense double barns, with wide double doors, to admit a fourhorse wagon with its towering load."<sup>55</sup> In Pennsylvania the part used as a stable was—and still is—built partly beneath the ground level, but this type of construction, due to the milder climate, is rarely found in North Carolina.

#### GARDENS AND ORCHARDS

A vegetable garden, supplying lettuce, cucumbers, sugar peas, beans, cabbage, potatoes, turnips, squashes, pumpkins, water-melons, and cantaloupes, was regarded as of such importance that a German in his will granted his wife the "privilege of the garden."<sup>56</sup> Cabbage plants, according to another will, were set

<sup>50</sup> F. A. Michaux, in *Early Western Travels*, 3:292.

<sup>51</sup> *Western Carolinian*, July 24, 1821.

<sup>52</sup> *Patriot*, Mar. 11, 1843.

<sup>53</sup> *Patriot and Flag*, Mar. 5, 1858.

<sup>54</sup> Peter Caspar's Will, Feb. 3, 1786; *Patriot*, July 30, 1842.

<sup>55</sup> Jethro Rumble, *A History of Rowan County, North Carolina*, 28 (Salisbury, N. C., 1881). Existing barns, with a few exceptions in Stokes and Forsyth counties, are much smaller than in Pennsylvania.

<sup>56</sup> *Records of the Moravians*, 1:98, 104, 111, 126; Peter Caspar's Will.

in a special "cabbage bed," and sometimes the heads weighed as much as 11 pounds.<sup>57</sup> Vegetable seeds, unobtainable in North Carolina, such as savoy and cauliflower, were supplied by a friend in Germany, together with Lueder's *Briefe über die Bestellung eines Küchengartens*.<sup>58</sup>

Among the other racial groups, gardens were neglected. When Lieutenant Governor Tryon was about to lay out a new plantation in 1765, he sent a messenger more than 200 miles to a German settlement for seeds of all kinds.<sup>59</sup> Ten years later, the inhabitants along the seaboard were described as too indolent to plant gardens, while in Lincoln County only about 5 percent of the non-Germans had gardens, and these planted cabbage in the cornfields.<sup>60</sup>

Although the aesthetic sense of the Germans soon found expression in flower gardens, they received very little attention from the rest of the people of the State as late as 1840.<sup>61</sup> The Germans of the present Forsyth County set out rosebushes in 1760, prepared lawns in 1775, and grew flowers of such beauty that editorial note was taken of them.<sup>62</sup> In an effort to encourage the cultivation of flowers, a German declared that floriculture exerted a "favorable influence on the intellect."<sup>63</sup>

Besides apple and peach trees planted in 1754, the orchards of the Germans of Forsyth County had a few pear, quince, apricot, and sweet and sour cherry trees within a decade. In other German communities the latter fruits were practically unknown except by name, until a German established a nursery in 1839 and acquainted the people with the different varieties of plums and many other kinds of fruit.<sup>64</sup>

<sup>57</sup> *Records of the Moravians*, 1:379. The date was Aug. 9, 1768.

<sup>58</sup> *Nordcarolinische Kirchennachrichten*, no. 2, p. 22, 57.

<sup>59</sup> *Records of the Moravians*, 1:301.

<sup>60</sup> [Janet Schaw], *Journal of a Lady of Quality*, 166, 174; F. A. Michaux, in *Early Western Travels*, 3:299.

<sup>61</sup> *Patriot*, Sept. 29, 1840.

<sup>62</sup> *Records of the Moravians*, 1:229; 2:896; *Patriot*, Sept. 29, 1840.

<sup>63</sup> *Ibid.*, Sept. 29, 1849.

<sup>64</sup> *Records of the Moravians*, 1:98; 2:564; F. A. Michaux, in *Early Western Travels*, 3:298-299. Until 1840 when a German grew apples weighing about one-half pound each, the natives of Salisbury had not even dreamed that the "cotton country" could produce fruit of such size. *Western Carolinian*, Feb. 21, 1840. In 1846, an

Although white grapes had been introduced by the Germans as early as 1764, viniculture was never engaged in to any great extent.<sup>65</sup> In 1850, the Catawba grape, then celebrated in the north, was scarcely known in its native North Carolina. In 1859 a prominent German recommended his hobby of growing fine grapes to his neighbors but apparently with little success.<sup>66</sup>

#### MARKETS

During the first decade of their settlement a few Germans carried on commerce in the heavier goods with Georgetown, South Carolina, as the Yadkin River was navigable as far north as its confluence with Rocky River, but the principal markets were Charleston, Fayetteville, Halifax, and Petersburg. Efforts to divert this trade to Wilmington proved unsuccessful because there were too few merchants to compete, and because the Great Western Road was so poorly laid out in colonial days that the settlers refused to use it.<sup>67</sup> As late as 1820, one-fourth and frequently one-third of the farm labor was consumed in getting products to market. In 1849, "Dutch wagoners" of Rowan County raised objections to a proposed plank road between Salisbury and Fayetteville, as the length of the old route would be needlessly increased 35 miles.<sup>68</sup> Yet on August 1, 1828, some twenty years earlier, the first railroad meeting in North Carolina had been held in the home of a German, William Albright of Chatham County.<sup>69</sup>

#### SOIL AND TIMBER CONSERVATION

Soil improvement received little or no attention in North Carolina prior to the coming of the Germans; the settlers on the

Orange County German astounded the people of Greensboro by raising apples weighing more than one and one-quarter pounds each. *Patriot*, July 23, 1839; Aug. 29, 1846.

<sup>65</sup> *Records of the Moravians*, 2:564; *Patriot*, Sept. 14, 1850.

<sup>66</sup> D. M. Barringer, *Address Delivered before the Mecklenburg Agricultural Society*, 18 ff. (Charlotte, N. C., 1860).

<sup>67</sup> *Colonial Records*, 5:356-357; *Records of the Moravians*, 1:339; F. A. Michaux, in *Early Western Travels*, 3:300.

<sup>68</sup> *Western Carolinian*, Aug. 15, 1820; *Carolina Watchman*, May 3, 1849.

<sup>69</sup> C. K. Brown, *A State Movement in Railroad Development*, 16 (Chapel Hill, N. C., 1928).

Coastal Plain either continued to farm their lands until they were completely exhausted or abandoned them after obtaining light-wood, pitch, tar, and turpentine.<sup>70</sup> Upon their arrival, the Germans began to search for limestone, the absence of which they regarded as their "greatest inconveniency."<sup>71</sup> In Lincoln County, they "dunged annually."<sup>72</sup> Significant of the value attached to the use of barnyard manure is the fact that in Cabarrus County a dung fork was listed as an heirloom in 1814.<sup>73</sup>

The advanced ideas of leading Germans on soil conservation are indicated in a speech by Charles Fisher to the Rowan Agricultural Society in 1821. He said in part:

We pursue a course of cultivation that takes all from the earth and returns nothing to it. . . . We completely exhaust our soil by an invaried succession of crops and when it can produce no longer, we turn it into old fields, let it wash into gullies, and grow up with pines and broom sedge, that never-failing symptom of exhaustion.

But, he continued, this spoliation of the soil may be arrested by the use of fertilizers, which he classified under three heads, barnyard, atmospherical, and mineral. Enlarging on the first class of manures, he said, "In our part of the country the practise of manuring has been miserably neglected," while in other sections the farmers "take as much care to make manure as to raise crops." As to the method of extracting fertilizer from the air, he said:

The best plan yet practised is that of enclosing, as connected with shifts of fields and rotation of crops. The principle of enclosing is to suffer our fields to become thickly covered with rich vegetable substances, undisturbed by any kind of stock, and then in proper season to turn it under.

Due to the scarcity of limestone in Rowan County, Fisher concluded, "Our main resource lies in the two first sorts."<sup>74</sup>

At a meeting called in 1759 to discuss the prevention of forest

<sup>70</sup> *Colonial Records*, 5:149.

<sup>71</sup> *Ibid.*, 5:356.

<sup>72</sup> F. A. Michaux, in *Early Western Travels*, 3:292. A Scotch planter's wife "declared she never would eat corn that grew thro' dirt." [Janet Schaw], *Journal of a Lady of Quality*, 160.

<sup>73</sup> Jacob Boger's Will. Pleas and Quarter Sessions, 2:203.

<sup>74</sup> *Western Carolinian*, July 17, 1821.

fires, a group of Germans agreed "to make every effort to preserve several pieces of fine young woodland for Bethabara and Bethania."<sup>75</sup> In 1764, a resolution to curb the promiscuous cutting of timber was adopted.<sup>76</sup> By 1820, at least one advocate of the conservation of forests in the modern sense of the phrase, sought to restrain the hand of the destroyer by urging him to reclaim old fields. He said:

The saving of timber should begin to enter into consideration of all landholders in this section of the country; by our wretched system of destruction it is rapidly passing from the face of the land. In another quarter of a century we may find it necessary to economize it even for fuel [since of] stone-coal we have little. Pass by the clearings and the heart sickens at the waste and destruction.

He advocated hedges rather than rail fences, believing that the latter wasted too much timber.<sup>77</sup>

#### THE ROWAN AGRICULTURAL SOCIETY

While the Germans easily surpassed their English and Scotch-Irish neighbors as farmers, their achievements fell far behind those of their cousins in Pennsylvania and other Northern States during the first quarter of the nineteenth century. In fact, their agriculture, as well as that of other North Carolinians, had not greatly advanced beyond that of their pioneer fathers. However, while others were satisfied with their progress, or lack of it, the Germans gradually became conscious of this static condition. One said, "We all must see the wretched condition of agriculture as it exists among us and anxiously wish for its amelioration."<sup>78</sup> Many of the once fertile fields of the present Rowan, Davie, Cabarrus, and Davidson counties, where Germans constituted more than 40 percent of the inhabitants in 1790, had become gullied and covered with pine and broom sedge.<sup>79</sup> Salisbury, located practically in the center of this region, annually imported

<sup>75</sup> *Records of the Moravians*, 1:215.

<sup>76</sup> *Ibid.*, 1:293.

<sup>77</sup> *Western Carolinian*, July 24, 1821.

<sup>78</sup> *Ibid.*, July 17, 1821.

<sup>79</sup> Based upon the writer's analysis of the Census of 1790. "The Beginnings of the Pennsylvania-German Element in Rowan and Cabarrus Counties," in the *Pennsylvania Magazine of History and Biography*, 58:368 (October 1934).

two to three thousand beeves from the upper country, as local farmers were unable to supply the demand. After searching for the causes of this backwardness, Charles Fisher concluded that it was because the farmers were perpetuating the customs and practises of the eighteenth century; he deplored the failure to reclaim old ground, the lack of farm implements, the inferior breeds of livestock, the wasteful methods of feeding, and the attempts to cultivate more than the labor supply justified.<sup>80</sup>

Aroused by this decay of agriculture, three men of German descent, together with others, sought to improve conditions by founding the Rowan Agricultural Society. At that time agricultural societies were almost unknown in the State.<sup>81</sup> A meeting to form a society had been held at Tarboro on November 29, 1810, but the Cape Fear Agricultural Society, in existence by 1811 and incorporated in 1813, was the first to be organized.<sup>82</sup> The Agricultural Society of North Carolina, established at Raleigh in December 1818, had four German members.<sup>83</sup> Thus, in the spring of 1821 when the first steps toward the founding of an agricultural society in Rowan County were taken, only two such societies existed in the State, and neither of them was in the Piedmont.<sup>84</sup> In the same year, however, an organization was perfected at Morganton, and another in Rutherford County. In Rowan County, the committee to draft a constitution was appointed on May 24, 1821, and on Independence Day, the farmers, under German leadership, "threw off the habits and practises of the early settlers" and adopted the constitution of the Rowan Agricultural Society.

The constitution as ratified recognized two classes of members, —regular and honorary. The latter were individuals residing

<sup>80</sup> *Western Carolinian*, July 17, 1821. While this leading German of his day remained wholly unaware of the blighting influence of slavery, thirty years later two other Germans in the State, Benjamin Sherwood Hedrick and Hinton Rowan Helper, heaped their condemnations upon slavery as the true cause of agricultural backwardness.

<sup>81</sup> *Western Carolinian*, June 12, 1821.

<sup>82</sup> *Raleigh Star*, June 14, 1811; *Laws of North Carolina*, 1813, ch. 98.

<sup>83</sup> *Constitution of the Agricultural Society of North Carolina* (Raleigh, 1819).

<sup>84</sup> *Western Carolinian*, May 22, 1821.



outside the County who were thus honored because of their contributions to agriculture. The constitution also provided for a committee of correspondence whose duty it was to procure the "best models of farming implements" and to obtain "information from other societies and intelligent individuals." Each member was to purchase the best implements on the market, to study agriculture, and to report important discoveries at each of the semi-annual meetings of the Society. The annual dues were two dollars and the initial fee, three dollars. Admission to membership required the favorable vote of four-fifths of the members present, attendance of at least twenty being requisite.<sup>85</sup> The charter further provided that the county fair and the Society's annual exhibits should be held on the same date under the supervision of the Society.<sup>86</sup> The influence of Germans in shaping its policies is evidenced by the fact that the three most important offices were filled by men bearing anglicized German surnames: Charles Fisher, the president; John Beard, Jr., the secretary; and Michael Brown, the treasurer.

At the initial meeting, the first Thursday in October was selected as the date for the annual agricultural show and the following list of premiums to be awarded that year was adopted.

- A silver cup or \$10.00 for the best colt or filly.
- \$5.00 for the best cow or calf, the best bull and calf of last spring's production, the best two-horse plow, manufactured in the State, and for the best one-horse plow.
- A silver cup or \$10.00 for the best practical essay on the subject of manures, particularly vegetable and atmospheric.
- A like prize for the best essay on the raising and management of all kinds of livestock, in which the errors and defects of the present practises are plainly pointed out and a better plan recommended.
- \$10.00 for the finest and best piece of homespun cloth, not less than ten yards, wool and cotton, or wool alone.
- Six silver spoons for the best cheese in two cakes, weighing not less than ten pounds each.

Provision was made also for an award sometime after October 1824 of twenty-five dollars or two silver goblets for the best live-fence

<sup>85</sup> *Ibid.*, July 17, 1821.

<sup>86</sup> *Laws of North Carolina*, 1821, ch. 87.

or hedge in the County, together with a carefully written account of the mode of its cultivation.<sup>87</sup>

The attendance at the fair on October 4, 1821, was less than that at similar gatherings in the north. An insufficient number of exhibits were entered, a deficiency for which the German farmers were partly responsible.<sup>88</sup> The promoters, however, declared that the results had exceeded their expectations.<sup>89</sup> At the next meeting of the Society they laid plans for a larger and better show the following year, and, among other premiums, offered ten dollars in silver to the farmer who gathered the most cotton or the most corn from reclaimed fields.<sup>90</sup>

#### THE BOARD OF AGRICULTURE OF NORTH CAROLINA

Charles Fisher of Salisbury sponsored the bill of 1822 "to promote Agriculture and Domestic Manufacturing in the State," and he was therefore responsible for the creation by the General Assembly of the Board of Agriculture of North Carolina.<sup>91</sup> At the first meeting of the presidents and the delegates from the various agricultural societies on November 24, 1823, he was also the leading spirit. He served as a member of the committee on rules and regulations and later recommended that a committee of correspondence and a committee of selection and publication be added to the staff of officers.<sup>92</sup> The duty of the former committee, as outlined by Fisher, was to obtain statistics on the staple crops in each county, markets, grain mills, oil mills, fulling mills, cotton and wool manufacturers, and the location of beds of limestone.<sup>93</sup> Upon his suggestion a large and a small plow and grass seed valued at one hundred dollars were sent to each society in the State. The committee on selection and publication, with Fisher as chairman, recommended the publication of the *Report on the Geology of North Carolina*, issued under the

<sup>87</sup> *Western Carolinian*, July 10, 1821.

<sup>88</sup> *Ibid.*, Oct. 23, 1821.

<sup>89</sup> *Ibid.*, Oct. 9, 1821.

<sup>90</sup> *Ibid.*, Nov. 6, 1821.

<sup>91</sup> The separate provisions are in the *Laws of North Carolina*, ch. 18 (1822).

<sup>92</sup> *Proceedings of the Board of Agriculture of North Carolina* (Raleigh, 1823).

<sup>93</sup> *Western Carolinian*, June 1, 1824.



auspices of the Board of Agriculture in November 1824.<sup>94</sup> North Carolina was the first State to publish a volume of this nature, and it is also interesting to note that three members of the above committee of five were of German ancestry. Fisher later became president of the Board, an office to which he was reelected in December 1828.<sup>95</sup>

#### SCIENTIFIC FARMING

"One of the great advantages flowing from societies of this kind," declared Charles Fisher in his presidential address at the founding of the Rowan Agricultural Society, "is that they are the means of commencing among the farmers, at one and the same time, a general movement towards systematic improvement."<sup>96</sup> While this society later disbanded without having brought about a general improvement in agriculture, its work marks the beginning of scientific farming among the more progressive Germans of the Piedmont.<sup>97</sup> Undeterred by the "sneers of neighbors," they gradually adopted newer methods of cultivation.<sup>98</sup> Thus, several years prior to 1832, one farmer had practically abandoned the common belief that a "heavy crop of weeds" was an exhausting crop; instead of plowing in wheat as was then the custom, he cross-harrowed it and successfully rotated wheat, corn, rye and oats, fallow and pasture.<sup>99</sup>

Outstanding among the farmers in Davidson County was William Rainey Holt, a physician and later president of the State Board of Agriculture.<sup>100</sup> In 1828, he bought a farm so exhausted as to be no longer in cultivation. After clearing it of rocks, brush, and brambles, he purchased the most modern farming implements on the market, plowed 7 to 8 inches deep, turned under clover

<sup>94</sup> *Ibid.*, May 4, 1824. The author was Denison Olmsted of the University of North Carolina.

<sup>95</sup> *Yadkin and Catawba Journal*, Jan. 6, 1829.

<sup>96</sup> *Western Carolinian*, July 17, 1821.

<sup>97</sup> In 1841, J. J. Bruner, editor of the *Carolina Watchman* (Salisbury), declared, "The founder of a good permanent agricultural society would deserve the thanks of the community." Quoted in the *Patriot*, Nov. 30, 1841.

<sup>98</sup> *Patriot*, Oct. 10, 1832.

<sup>99</sup> *Ibid.*, Oct. 10, 1832.

<sup>100</sup> *Ibid.*, Apr. 23, 1839.

and oats in the milk stage, fertilized with barnyard manure, dressed the ground with leached ashes and plaster of Paris at the ratio of 10 to 1 bushels per acre, sowed  $2\frac{1}{2}$  bushels of white Etrurian wheat with 250 pounds of Peruvian guano per acre, and succeeded in growing wheat  $5\frac{1}{2}$  feet tall, yielding 46.64 bushels, testing 60 pounds, per acre in a field of  $8\frac{3}{10}\%$  acres at a cost of \$17.50 per acre, leaving a profit, before deducting taxes and interest, of \$40.50 on each acre cultivated. Another field of  $22\frac{3}{4}$  acres, following a corn crop of the previous year, yielded 46.07 sixty-pound bushels of Purple Straw wheat at a profit of \$47.03 per acre in 1857.<sup>101</sup> It had been in cotton for thirty-five successive years, but during the last ten it had repaid careful fertilizing by producing 8,000 to 12,000 pounds of cotton in the seed. Not only was he regarded as the State's most successful farmer, but agriculturists from Virginia and Maryland and even George Bancroft, the historian, visited his farm.

When the new chair of chemistry applied to agriculture and the arts was created at the University of North Carolina in 1852, Benjamin Sherwood Hedrick was the first incumbent.<sup>102</sup>

As a committee of the Assembly of North Carolina observed in 1778, it was the German farmer by whom agriculture was "improved and extended in the western part of the State."<sup>103</sup>

WILLIAM H. GEHRKE

*Greensboro, North Carolina*

<sup>101</sup> *North Carolina Planter*, quoted in the *Patriot and Flag*, Mar. 5, 1858.

<sup>102</sup> J. G. de Roulhac Hamilton (ed.), "Benjamin Sherwood Hedrick," in the *James Sprunt Historical Publications*, 10 (1):7 (Chapel Hill, N. C., 1910).

<sup>103</sup> "Bagge MS" (no date, probably 1783), in *Records of the Moravians*, 3:1206.

## NEWS NOTES AND COMMENTS

### THE 1935 ANNUAL MEETING OF THE AGRICULTURAL HISTORY SOCIETY

The 1935 annual meeting of the Agricultural History Society, held at the University Club, Fifteenth and Eye Streets, N.W., Washington, D. C., on May 7, 1935, was well attended, forty-three being at the dinner and business session and sixty at the program. Professor Edwin F. Gay of Harvard University, the Society's retiring president, delivered an informal address on "The Interrelation of the Agrarian and Industrial Revolutions in England."

Ballots having been submitted to the members of the Society the following were declared elected for the year 1935-36: president, Mr. Clifford V. Gregory, editor of the *Prairie Farmer*, Chicago; vice-president, Professor G. N. Lauman of Cornell University; secretary-treasurer, Dr. O. C. Stine of the U. S. Department of Agriculture; elective members of the executive committee, Dr. Henry C. Taylor, American delegate, International Institute of Agriculture, Rome, Italy, and Dr. Carl R. Woodward of Rutgers University. These names accord with the recommendations of the nominating committee consisting of Professor Asher Hobson of the University of Wisconsin (chairman), Professor James E. Boyle of Cornell University, Professor Wendell H. Stephenson of Louisiana State University, Dr. B. T. Galloway of the U. S. Department of Agriculture, and Dr. Gertrude B. Working of Washington, D. C.

The auditing committee, consisting of Mr. Charles E. Gage and Miss Cora L. Feldkamp of the U. S. Department of Agriculture and Dr. Edmund C. Burnett of the Carnegie Institution of Washington, reported the approval of the records of the secretary-treasurer, for the period May 1, 1934 to May 1, 1935.

### MEETING OF THE MISSISSIPPI VALLEY HISTORICAL ASSOCIATION

The twenty-eighth annual meeting of the Mississippi Valley Historical Association was held at Cincinnati, Ohio, April 25-27, 1935. At the business session, Professor Louis Pelzer of the State University of Iowa was elected president. At the session on Agriculture in the West the following papers were presented: "The Turnover of Farm Population," by James C. Malin, University of Kansas; "The West and National Agriculture in the Ante-Bellum Period," by Herbert A. Kellar, McCormick Historical Association; "The Significance of the Wheat (and Related) Trade in the Mississippi Valley, 1846-1862," by T. P. Martin, the Library of Congress; Discussion, by Kathleen Bruce, Hollins College. The following papers constituted the session on Land Policies: "The Federal Land System in an Embryo State [Washington]," by R. M. Robbins, Western Reserve University; "The Homestead Law in an Incongruous Land System," by Paul W. Gates, Bucknell University; "The Opening of Oklahoma," by A. T. Volwiler, Ohio University; "The Homestead Act and the Labor Surplus," by Fred A. Shannon, Kansas State College of Agriculture. Other subjects presented that relate to agricultural his-

tory were: "Agrarianism, Capitalism, and Territorial Expansion, 1789-1815," by Arthur P. Whitaker, Cornell University; and "The Humor of the Cowboy," by E. E. Dale, University of Oklahoma.

#### INTERNATIONAL COMMITTEE ON PRICE HISTORY

The International Committee on Price History was first proposed by Professor Edwin F. Gay to Sir William Beveridge in the summer of 1927. Sir William Beveridge had for some time been studying wheat prices in England and, believing that a price history on a broader scale would be very much worth while, he agreed to be chairman of an international committee. A preliminary conference in Paris in 1929 worked out a plan of procedure, and a grant was made by the Rockefeller Foundation for five years. The study of prices is based on data from original documents and, so far as possible, it covers long periods in homogeneous price areas in the following countries: England under Sir William Beveridge, South-western Germany (including Hamburg) under Dr. Moritz Elsas, Germany under Professor Alfred Pribram, France under Professor Henri Hauser, the Netherlands under Dr. N. W. Posthumus, Spain under Dr. Earl J. Hamilton, and the United States under the general direction of Dr. Arthur H. Cole, who is also financial representative for the organization. At the end of the five-year period the work of collecting data had progressed far enough so that the Committee could contemplate publication. In order to complete the work and ensure publication the Rockefeller Foundation has given a grant for two additional years. The Spanish price history has already been published in part. Dr. Hamilton's volume on the sixteenth century appeared in the Harvard Economic Studies last year. He has material ready for the press now for two or three centuries before the sixteenth and these will be followed by a volume on the period since the sixteenth century. Dr. Pribram's material for Austria is now ready for the press and the general volume on the colonial period in America will be by the end of this summer. The material from England and the Netherlands will be ready for publication by the end of next year, and it is hoped that the French material will also be completed by that time.—*Based on a letter from Professor Gay, dated May 21, 1935.*

#### AGRICULTURAL HISTORY AT NORTH DAKOTA AGRICULTURAL COLLEGE

North Dakota Agricultural College has offered a course on the history of agriculture in Europe and America for a number of years. Originally developed by the late Professor William J. Trimble, it was continued by Professor Earle D. Ross, now at Iowa State College, and later by Professor W. C. Hunter, head of the Department of History. It is now being conducted by Assistant Professor Rudolf Ottersen. The course is a survey of the great economic changes with special emphasis on the developments in agriculture and the effects of the changes in industry and trade upon agricultural progress. Although designed for students in the School of Agriculture, it is open to others.

#### THE MERCER POTATO

Dr. George Fiske Johnson and Mr. W. S. Hagar of the Pennsylvania Department of Agriculture at Harrisburg have prepared a "History of the Mercer Potato" which is available in mimeographed form. This was the first popular variety of

the Irish potato to be developed in the United States. It was propagated about 1800 and set the standard for potato excellence during the first half of the nineteenth century. The subject illustrates very well how extremely important links in the history of phases of agriculture may be lost. The authors will appreciate any additional data on the Mercer potato for inclusion in a final version of the subject.

"UPON THE EVOLUTION OF THE SIRLOIN"

Professor C. S. Plumb of the department of animal husbandry of Ohio State University is engaged in a special study of animal husbandry in England from the time of John Fitzherbert in 1523. He addressed the Animal Husbandry Club of Purdue University on February 27, 1935 on the above subject. Professor Plumb is assiduously adding to his large library of literature on animal husbandry, and plans to donate it ultimately to Ohio State University for preservation as a special collection for the use of graduate students and specialists.

PERSONAL PAPERS IN THE MANUSCRIPT COLLECTIONS OF THE  
MINNESOTA HISTORICAL SOCIETY

*Guide to the Personal Papers in the Manuscript Collections of the Minnesota Historical Society* (St. Paul, 1935. 146 p.), compiled by Grace Lee Nute and Gertrude W. Ackermann and issued by the Minnesota Historical Society as its *Special Bulletin 1*, is a valuable research aid not only because it is an indispensable key to the 455 collections of personal papers in the possession of the Society but also because it is a model of what other similar organizations should do. Furthermore, it is the first of a series that will ultimately afford descriptions of all groups of manuscripts in the Society's collections.

PERSONAL

Mr. Herbert D. Allman's *A Unique Institution; the Story of the National Farm School* (Philadelphia, printed for the author by the Jewish Publication Society of America, 1935. 222 p., illus.), is an inspiring history of the non-sectarian institution, founded by Dr. Joseph Krauskopf at Doylestown, Pennsylvania, in 1896. Mr. Allman, long a leader in the communal life of Philadelphia, is its president.

Professor Marc M. Cleworth of Northern State Teachers College, Aberdeen, South Dakota, has been active in organizing the Northeastern South Dakota Historical Society. The materials collected for a museum, temporarily located at the college, have aroused much interest, and steps are being taken to build a collection of historical manuscripts relating to the region.

Dr. Edwin Adams Davis of the department of history of Louisiana State University is preparing a comprehensive study of "The Economic and Social Life in the Florida Parishes of Louisiana, 1830-1850," and of "The Plantation Experience of Bennett H. Barrow, at St. Francisville, Louisiana, 1836-1846." He is interested in the collection and editing of plantation diaries and similar records in the lower Mississippi Valley region. Some day we may expect a comprehensive study of "Plantation Life in the Lower Mississippi Valley" from the pen of Dr. Davis.

Miss Angie Debo has received a grant-in-aid from the Social Science Research Council for a study of the effect of land allotment upon the members of the five civilized tribes of Indians.

Mr. Guy A. Lee of Harvard University has received a pre-doctoral field fellowship from the Social Science Research Council for the study of railroad, elevator, mill, and other records of mid-western agrarian history.

The pamphlet by Dr. J. G. Lipman, *The Stuff of Life* (The Chandler Lecture, 1935. New York, Columbia Univ. Press, 1935. 30 p.), is a scientific discussion of the elements which are common to man, animal, plant, and tree.

Mr. Miles S. Malone of the Hill School, Pottstown, has received a grant-in-aid from the Social Science Research Council to continue his investigation of the influence of the Rappahannock and Potomac ports on the economic and social development of colonial Virginia.

Miss Hazel Pulling of McLaughlin, South Dakota, has prepared a Master's thesis at the University of Chicago on "The Livestock Industry in South Dakota" under the direction of Professor Avery Craven. She is teaching at Northern State Teachers College at Aberdeen during the absence of Professor Marc M. Cleworth who is doing graduate work at the University of Minnesota this summer.

Professor L. B. Schmidt is teaching a course on the history of American agriculture at the University of Texas during the summer of 1935. He has also been investigating the conflict of agrarianism and industrialism in the United States preceding the Civil War.

#### CURRENT ARTICLES AND BOOKS ON THE HISTORY OF AMERICAN AGRICULTURE

*General or unclassified:* "Agricultural Records in the Baker Library," *Business Hist. Soc. Bull.*, 9:60-63 (June 1935). D. W. Brogan, "The Rise and Decline of the American Agricultural Interest," *Econ. Hist. Rev.*, 5(2):1-23 (April 1935). A. F. Burns, *Production Trends in the United States since 1870* (New York, Natl. Bur. Econ. Research, 1934. xxxii, 363 p.). The "Historical Notes" section of the *Grain Inspectors' Letter*, April 1935, includes a brief outline of the important dates in the history of grain inspection at Chicago and a summary of siligo. G. F. Johnson, "The Early History of Copper Fungicides," *Agr. Hist.*, 9:67-79 (April 1935). E. L. Larsen (translator), "Pehr Kalm's Description of Maize, How It Is Planted and Cultivated in North America, Together with the Many Uses of This Crop Plant," *ibid.*, 98-117. Hugh Nicol, "Mixed Cropping in Primitive Agriculture," *Empire Jour. Expt. Agr.*, 3:189-195 (April 1935). Samuel Rezneck, "The Social History of an American Depression, 1837-1843," *Amer. Hist. Rev.*, 40:662-687 (July 1935).

*Alaska:* C. L. Andrews, "Driving Reindeer in Alaska," *Wash. Hist. Quart.*, 26:90-93 (April 1935).

*California:* E. L. Bogart, "The Water Problem of Southern California," *Univ. Ill. Bull.* 31 (43), 132 p. (1934).

*Georgia:* M. B. Hamer, "The Foundation and Failure of the Silk Industry in Provincial Georgia," *N. C. Hist. Rev.*, 12:125-148 (April 1935).

*Great Plains:* Walter Kollmorgen, "Rainmakers on the Plains," *Sci. Mo.*, 40:146-152 (February 1935). C. E. Kellogg, "Soil Blowing and Dust Storms," *U. S. Dept. Agr. Misc. Pub.* 221, 11 p. (Washington, 1935). L. H. Block, "The Record-Breaking Drought, Heat, and Dust Storms of 1934," *Amer. Meteorol. Soc. Bull.*, 15:300-307, (1934).

*Illinois:* E. M. Poggi, *The Prairie Province of Illinois; A Study of Human Adjustment to the Natural Environment* (Urbana, Univ. Ill., 134. 124 p.).